Abstract of the Disclosure

The present invention concerns the use of a sphingoid- polyalkylamine conjugate comprising a sphingoid backbone carrying, via a carbamoyl bond, at least one polyalkylamine chains as a capturing agent of nucleic acid molecules. The present invention also provides the use of the sphingoid polyalkylamine conjugate for the preparation of a pharmaceutical composition for the delivery of a nucleic acid molecule into a target cell. In a further aspect the invention provides a method for transfecting a nucleic acid into a target cell, the method comprises contacting said target cell with the sphingoid-polyalkylamine conjugate associated with a nucleic acid molecule, thereby transfecting said target cell with said nucleic acid molecule. Other aspects of the invention concern pharmaceutical compositions comprising said conjugate, therapeutic methods as well as kits, making use of the said conjugate. A preferred conjugate according to the invention is N- palmitoyl D-erythrosphingosyl -1- carbamoyl spermine.